REMARKS

The Office Action dated May 28, 2004 has been received and carefully noted. The above amendments to the claims and the following remarks are submitted as a full and complete response thereto. Claims 1-15 are again respectfully submitted for consideration.

In the Office Action, claims 1, 2, 4-9 and 11-15 were rejected under 35 USC § 102(b) as being anticipated by *Spinney* (U.S. Patent 5,414,704). The Office Action took the position that *Spinney* taught every element of the rejected claims. Claims 3 and 10 were rejected under 35 USC § 103(a) as being unpatentable over *Spinney* in view of *Warren* (U.S. Patent 6,690,667). The Office Action took the position that *Spinney* disclosed all of the elements of the claimed invention, with the exception of "XOR indexing said index portion to said bucket portion." *Warren* was cited as curing the deficiencies in *Spinney*.

However, with respect to the latter rejection, Applicants note that *Warren* has a filing date of November 30, 1999, while the instant application claims priority under 35 U.S.C. §119(e) to provisional application 60/166,225, filed November 18, 1999. Thus, Applicants respectfully assert that *Warren* cannot be applied as prior art against the instant application and the rejection under §103 alleging to apply *Warren* is *per se* improper. Withdrawal of the latter rejection is respectfully requested. With respect to the rejection applying *Spinney*, that rejection is respectfully traversed below.

The present invention is directed, according to claim 1, to a method of performing a table look-up in a network device. The method includes receiving a data packet through an input port of the network device, parsing the data packet into an index portion and a corresponding bucket portion, indexing the index portion to the corresponding bucket portion and accessing address table information stored in an address look-up table using the bucket portion.

The present invention is directed, according to claim 8, to an address table look-up indexing device. The device includes a receiver portion of a port of a network device that receives an incoming data packet, a data parser that parses the data packet into an index portion and a corresponding bucket portion, an indexer that indexes the index portion to the bucket portion and an address lookup device that accesses an address look-up table using the corresponding bucket portion.

The present invention is directed, according to claim 15, to a network switch. The switch includes multiple ports used for receiving and exporting data, each of the multiple ports being connected to one another through a communications medium, and multiple Address Resolution Logic (ARL) devices, each of the multiple ARL devices being connected to one of the multiple ports, each of the multiple ports having a corresponding ARL device. Each of the multiple ARL devices includes a parser that parses data into an index portion and a corresponding bucket portion, an indexer that indexes the index portion to a corresponding bucket portion and a look-up device that accesses table entries in a look-up table using the bucket portion.

As discussed in the present specification, the present invention enables an enhanced method and apparatus for table look up in address resolution. The process, illustrated for one embodiment in Fig. 2A, shows a 48 bit key parsed into and index portion (I) and a bucket portion (N). As illustrated in Fig. 2B, the index and bucket portions are used in concert to perform the table look up. It is respectfully submitted that the prior art of *Spinney* fails to disclose or suggest the elements of any of the presently pending claims. Therefore, the prior art fails to provide the critical and unobvious advantages discussed above.

The Office alleges in the rejection that *Spinney* teaches all of the elements of the claims. *Spinney* is directed to a process of performing source and destination address lookups, where that lookup uses a combination of programmable hash algorithms, binary search algorithms and small content-addressable memory (CAM). While it is true that *Spinney* and the instant invention are concerned with address resolution, the methodologies employed are quite different.

The rejection makes reference to the portions of *Spinney* that describe the receipt and parsing of packets and the accessing an address lookup table, but also references Fig. 6 and alleges that the figure provides for bucket and index portions of a packet. However, Fig. 6 does not illustrate packet portions, but rather provides a structure of the hash table. The buckets of the hash table are used to store multiple indices and have nothing to do with the parsing of a bucket portion of a packet, as described and claimed

in the instant invention. For a clearer understanding of the process of address lookups in *Spinney*, one should refer to Fig. 8 thereof.

Fig. 8 of *Spinney* illustrates that an input address is sent to the CAM and to a hash function to produce a hash address (88) and a remainder field (97). The hash address is used with the hash table (89) to produce a translation table pointer to ultimately produce an address. The remainder field is used to determine the correct branching in a logic tree of the entries. However, this process fails to teach or suggest all of the elements of claims 1, 8 or 15.

Claim 1 recites "indexing said index portion to said corresponding bucket portion," with claims 8 and 15 reciting an indexer that indexes the index portion to the bucket portion. In *Spinney*, even if, as alleged, the hash address and remainder field are equivalent to the claimed index and bucket portions, those portions would not need to be indexed. In *Spinney*, the remainder field is used only to select a correct branching. As such, Applicants respectfully assert that the rejection of claims 1, 8 and 15 is improper because *Spinney* fails to teach all of the elements of those claims. Similarly, the rejection of the dependent claims, namely claims 2-7 and 9-14, is also improper for at least the dependence of those claims on the independent claims. Reconsideration and withdrawal of the rejection are respectfully requested.

Similarly, Applicants also respectfully assert that the instant claims are also not obvious in view of *Spinney*. Given the process illustrated in Fig. 8 of *Spinney* and described therein, there would be no need to index portions of the parsed packet. The

indexing of the index portion and the bucket portion is an integral part of the methodology of the instant invention, but one of ordinary skill in the art would not be motivated to include such an indexing function to the method described in *Spinney*. As such, Applicants respectfully assert that claims 1-15 are also not rendered obvious in view of *Spinney*.

In view of the above, Applicants respectfully submit that claims 1-15 each recite subject matter which is neither disclosed nor suggested in a *Spinney*. As discussed above, Applicants respectfully assert that the rejection applying Warren is improper and moot since Warren cannot be applied as prior art against the instant application. It is therefore respectfully requested that all of claims 1-15 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant hereby petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees or deficiency of fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

33,125 for

Kevin F. Turner
Registration No. 43,437

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

KFT/lls/scc